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WO 01/77137 A1

(54) Title: **ALBUMIN FUSION PROTEINS**

(57) Abstract: The present invention encompasses albumin fusion proteins. Nucleic acid molecules encoding the albumin fusion proteins of the invention are also encompassed by the invention, as are vectors containing these nucleic acids, host cells transformed with these nucleic acids vectors, and methods of making the albumin fusion proteins of the invention and using these nucleic acids, vectors, and/or host cells. Additionally the present invention encompasses pharmaceutical compositions comprising albumin fusion proteins and methods of treating, preventing, or ameliorating diseases, disorders or conditions using albumin fusion proteins of the invention.

Query Match	18.7%	Score 674.5	DB 22	Length 832
Best Local Similarity	30.5%	Pred. No. 4.4e-49		
Matches 214	Conservative 90	Mismatches 285		

0x	12	20,	285;	Indels	113;	Gaps	28;
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QY 12 SAPRARVGP PARGLPLRLRLLLL-----WAAASAOGHLRSGRIFAVMKGHYG 63
::: ||| |
Db 8 AAFWGALPPRP-----PLLTLTLLLOPPPTWALSIPRSTPIGSENNP

[illegible][illegible]

OY 119 SCITDZ -----
----- RUSOINBSF LPRGGEYQELLMGADAEEKQ 113

114 QCSFKGDPQRDCQNYIKILPLSLGHLFTTCGTAASFDMCTYINENENETIADDEKGNVY 173

164 GEMBCYAPEDDDEUETUT BBAZ
173

[illegible]

222 POETIKATYVOD... 232

[illegible]

278 VSKWNTETI KAMI VCSDA MEWZUNUR CUNUT 292

Db

293 -QRWTSFLKAQILLCSPDPDGFENVLQDVFETLSPPQDWRDTLRYGVFTSQMHRGTGGS 351

333 AVCVYSLGIDPKVF-----PMSGIKCVUUCGI DUDRRAUUAUUII
QY

Dd
352 AACVETMDYQRFVESGLYKEVNRETQQMYTVTHPPTPRGACITNSARERKINSLOLP 411

382 DR-----HPЕVAORBEPMГРЛКТРПЕНСКУЧУКОВАНННООЗСВСТТТТТТ

412 DRVLNFKDHFIMDQGVRSKMLLP-----QARYQRAVAVHVRFGLN-HTYDVLFEG 462

431 TDRGTHKVVPERGEOHSFAFNIMEIOFFRRAAIOTMSIDAEPKIVYSEOWEYQVW 432

463 TGDGRLRAKAVSVGPRVHI---IEELQIFSSGQPVQNLLDPTHRGLLYAASHSGVQVPM 518

491 DLCEVYGGGCHGLMSRDPYCGWDQGRCL--ISYSS---RSVLTOSTNPAPFPHKEC----- 541

b
519 ANCSLY-RSCGDLRLDRPYCÄWSSSCHSVSLYQPOLATRPWIQDIEGASAKDLCSASS 577

542 ---PNPKP-DKAPLQKVSAPNSRYLSCPMESRHATYSWRHK---ENVEOSCEPGHOSP 594

578 VVSPSEFVPTGEKPCDEYQFQPTNTVNTLACPLLNLATRLMLRNGAPVNASASC--HVL P 634

595 NCILEIENTAQQYGHYFC-EAQEGSYFREAOHWQLLPEDGI 635

635 TGDLL--VGTQQLGEFQCWSLEEGFQQLVASCYCPVEVEDGV 674

RESULT 15

ABG64522
D
X

ABG64522: . . .

27-AUG-2002 (first entry)

Human albumin fusion protein #1107

Albumin fusion protein; therapeutic protein X; human albumin; HA; human serum albumin; HSA. Cancer. 2003;101(1):1-11.

KW	digestive disorder; immune disorder; endocrine disorder;
KW	haematopoietic disorder; neural disorder; connective disorder;
KW	cytostatic; antifertility; antiinflammatory; anticancer;
KW	immunomodulator; anti-HIV; antidiabetic; haemostatic; neurotropic;
KW	neuroprotective; antiparkinsonian; antimicrobial; neuroleptic;
KW	osteopathic; antiarthritic.
OS	Homo sapiens.
XX	Synthetic.
PN	MO200177137-A1.
PD	18-OCT-2001.
XX	
PR	12-APR-2001; 2001WO-US11988.
XX	
PR	12-APR-2000; 2000US-229358P.
XX	
PR	25-APR-2000; 2000US-199384P.
XX	
PR	21-DEC-2000; 2000US-256931P.
XX	
PA	(HUMA-) HUMAN GENOME SCI INC.
XX	
PI	Rosen CA, Haseltine WA;
XX	
DR	WPI: 2002-010886/01.
XX	
PT	New fusion protein for treating disease e.g. diabetes comprises an
PT	albumin fused to a therapeutic protein .
XX	
PS	Claim 1: Page 1288-1291; 2102pp; English.
XX	
CC	The present invention relates to albumin fusion proteins comprising a
CC	therapeutic protein X and human albumin (HA, also known as human serum
CC	albumin, HSA). The proteins are useful for treating a disease or
CC	disorder that may be modulated by therapeutic protein X. The albumin
CC	extends the shelf-life of protein X, and may increase its biological
CC	in vitro/in vivo activity. The protein is useful for treating and
CC	diagnosing disorders such as cancer, reproductive disorders, digestive
CC	disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders
CC	(e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders
CC	(e.g. diabetes), haematopoietic disorders, neural disorders
CC	(e.g. Alzheimer's, Parkinson's, Creutzfeldt-Jacob disease,
CC	encephalomyelitis, meningitis), schizophrenia), and connective disorders
CC	(e.g. osteoporosis, arthritis). Abg63326-Abg65518 represent albumin
CC	fusion proteins of the invention.
XX	
SQ	Sequence 832 AA;
XX	
Query Match	18.7%; Score 674.5; DB 23; Length 832;
Best Local Similarity	30.5%* Pred. No. 4.4e-49;
Matches 214: Conservative 90; Mismatches 285; Indels 113; Gaps 28;	
QY	12 SAPRRVRPPPPRLGLRLRLLL-----WAAASAGHLRSGRIFAVWKGHVG 63
DB	8 AAPKALPRP-----PLLLLLLLLLQPPPTWALSPRLSLPGSEBRPL----- 55
QY	64 QDRVDFGTEPTTVLFHEPGSSVWVGGRGKY-----LFDEPBEKNAASVRTVNICSTKG 118
DB	56 --RFEAEHISNVTALLLSRDGRILYVGRREALFALSNLSLPGGEYQELLMGADAEKKQ 113
QY	119 SCLDK-----KDCENYI-TLLERSEGLLAGTNAHRPSCW--NLVNGTV-----VPL 163
DB	114 QCFSEFGKDPQRDCNVIKILPLSGSHLFTGTAASFMCYIIMNENTLARDEKGNVLL 173
QY	164 GEMGYAEPSPDENSLVLFEGDEVYSTIRKQEVNGKIPFRFRIGESELYSDTV--MQN 221
DB	174 EDGGRCPDFPNERSTALVVDGELY-TGTVSSFGNDPAISRQSLRKTKESSLNMLQD 232
QY	222 PQTIKATIVHD-----QAYDQKIYFFREDNDPKNFPALVSRVAQLCRDQGGESLS 277
DB	233 PAFVAASVIPESIGSLQGGDDDKITFFSEFGQEEFFENVTYRIARIQICDEGGERVILQ 292
QY	278 VSKRNTFLKAMLVCSDAATKKNFNRLQDVELLPDPSCQMDRTIRYGVFSNPWNY-----S 337